	Application No.	Applicant(s)
Notice of Allowability	10/608,888	STEINBERG ET AL.
	Examiner	Art Unit	
	Chriss S. Yoder, III	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *Amendment filed 10/29/2007*.

2. ☒ The allowed claim(s) is/are *1-7,9-10,17-19,21-23,25-31,33-34,36-37,41-43,45-47 (now renumbered 1-32)*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None   of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
        Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO/SB/08),
    Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit
    of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☒ Interview Summary (PTO-413),
    Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

LIN YE
SUPERVISORY PATENT EXAMINER

DETAILED ACTION

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview

with Andrew Smith on December 19, 2007.

The application has been amended as follows:

Claim 5 (Currently Amended):   Within a digital acquisition device with an adjustable optical system having an auto focusing mechanism, a method of perfecting said auto focus member of said adjustable optical system as part of an image capture process using face detection in said image capture process to achieve one or more desired image acquisition parameters comprising:
        (a) identifying a plurality of groups of pixels that correspond to an image of a face within a digitally-captured image, and determining corresponding image attributes to said group of pixels; and
        (b) perfecting said auto focus by performing said auto focus on said plurality of groups of pixels that correspond to said image of said ~~focus~~ **face**, and
        (c) wherein the face pixels identifying step being automatically performed by an image processing apparatus, the method further comprising manually removing an indication as a face of at least one of said plurality of groups of pixels detected as a face by increasing a sensitivity level of said face identifying.

Claim 25 (Currently Amended):   Within a digital acquisition device with an adjustable optical system having an auto focusing mechanism, one or more processor readable storage devices having processor readable code embodied thereon, said processor readable code for programming one or more processors to perform a method of perfecting said auto focus mechanism of said adjustable optical system as part of an image capture process using face detection in said image capture process to achieve one or more desired image acquisition parameters, the method comprising:
        (a) automatically identifying a plurality of groups of pixels that correspond to an image of a face within a digitally-captured image, and determining corresponding image

attributes to said group of pixels using an image processing apparatus which receives a relative value as to an estimated importance of said detected regions, and

(b) perfecting said auto focus by performing said auto focus on said plurality of groups of pixels that correspond to said image of said face, and

(c) wherein said performing said auto focus on said plurality of groups being done by calculating a weighted average on the individual object of said groups, and

(d) wherein the face pixels identifying step being automatically performed by an image processing apparatus which receives a relative value as to an estimated importance of said detected **regions**,

(e) wherein the estimated importance of said detected regions of faces comprising at least one parameter including size of said faces ~~comprising at least one parameter including size of face~~ or relative exposure of said faces, or both, wherein calculating a weighted average being done based on said relative values as to the estimated importance.

Allowable Subject Matter

Claims 1-7, 9-10, 17-19, 21-23, 25-31, 33-34, 36-37, 41-43, and 45-47 are

allowed.

The following is an examiner's statement of reasons for allowance:

As for **claim 1**, the prior art does not teach or fairly suggest the use of a digital

acquisition device with an adjustable optical system having an auto focusing

mechanism, a method of perfecting said auto focus mechanism of said adjustable

optical system as part of an image capture process using face detection in said image

capture process to achieve one or more desired image acquisition parameters,

comprising (a) identifying a plurality of groups of pixels that correspond to an image of a

face within a digitally-captured image, and determining corresponding image attributes

to said group of pixels, and (b) perfecting said auto focus by performing said auto focus

on said plurality of groups of pixels that correspond to said image of said face, and (c)

wherein said performing said auto focus on said plurality of groups being done by

calculating a weighted average on the individual objects of said groups, wherein said

calculating a weighted average is done based upon relative values as to an estimated

importance of detected face regions, and (d) wherein identifying of face pixels is

automatically performed by an image processing apparatus which receives a relative

value as to the estimated importance of detected face regions, and (e) wherein the

estimated importance of said detected face regions is based on at least one parameter

including size of said faces or relative exposure of said face, or both.

As for **claim 5**, the prior art does not teach or fairly suggest the use of a digital

acquisition device with an adjustable optical system having an auto focusing

mechanism, a method of perfecting said auto focus member of said adjustable optical

system as part of an image capture process using face detection in said image capture

process to achieve one or more desired image acquisition parameters comprising (a)

identifying a plurality of groups of pixels that correspond to an image of a face within a

digitally-captured image, and determining corresponding image attributes to said group

of pixels, and (b) perfecting said auto focus by performing said auto focus on said

plurality of groups of pixels that correspond to said image of said face, and (c) wherein

the face pixels identifying step being automatically performed by an image processing

apparatus, the method further comprising _manually removing_ an indication as a face of

at least one of said plurality of groups of pixels detected as a face by _increasing a_

sensitivity level of said face identifying.

As for **claim 17**, the prior art does not teach or fairly suggest the use of a digital

camera having a lens system, a method of adjusting a digitally-detected image based

on detection of faces within the image to achieve a desired image parameter,

comprising the steps of (a) identifying a group of pixels that correspond to a face within

the digitally-detected image, (b) determining initial values of one or more parameters of

the pixels of the group of pixels, (c) automatically adjusting values of the one or more

parameters of the pixels of the group of pixels based upon a comparison of the _initial_

parameter with the desired parameter, and (d) wherein the one or more parameters of

pixels of the group of pixels comprising _a location of the face_ within the digitally-

detected image.

As for **claim 21**, the prior art does not teach or fairly suggest the use of a digital

camera having a lens system, a method of adjusting a digitally-detected image based

on detection of faces within the image to achieve a desired image parameter,

comprising the steps of (a) identifying a group of pixels that correspond to a face within

the digitally-detected image, (b) determining initial values of one or more parameters of

pixels of the group of pixels, (c) automatically providing an option for adjusting values of

the one or more parameters of the pixels of the group of pixels based upon a

comparison of the _initial parameter with the desired parameter_, and (d) wherein the one

or more parameters of pixels of the group of pixels comprising _a location of the face_

within the digitally-detected image.

As for **claim 25**, the prior art does not teach or fairly suggest the use of a digital

acquisition device with an adjustable optical system having an auto focusing

mechanism, one or more processor readable storage devices having processor

readable code embodied thereon, said processor readable code for programming one

or more processors to perform a method of perfecting said auto focus mechanism of

said adjustable optical system as part of an image capture process using face detection

in said image capture process to achieve one or more desired image acquisition

parameters, the method comprising (a) automatically identifying a plurality of groups of

pixels that correspond to an image of a face within a digitally-captured image, and

determining corresponding image attributes to said group of pixels using an image

processing apparatus which receives a relative value as to an estimated importance of

said detected regions, and (b) perfecting said auto focus by performing said auto focus

on said plurality of groups of pixels that correspond to said image of said face, and (c)

wherein said performing said auto focus on said plurality of groups being done by

calculating a weighted average on the individual object of said groups, and (d) wherein

the face pixels identifying step being automatically performed by an image processing

apparatus which receives a relative value as to an estimated importance of said

detected regions, (e) wherein the estimated importance of said detected regions of

faces comprising at least one parameter including size of said faces or relative

exposure of said faces, or both, wherein _calculating a weighted average being done_

based on said relative values as to the estimated importance.

As for **claim 29**, the prior art does not teach or fairly suggest the use of a digital

acquisition device with an adjustable optical system having an auto focusing

mechanism, one or more processor readable storage devices having processor

readable code embodied thereon, said processor readable code for programming one

or more processors to perform a method of perfecting said auto focus mechanism of

said adjustable optical system as part of an image capture process using face detection

in said image capture process to achieve one or more desired image acquisition

parameters, the method comprising (a) identifying a plurality of groups of pixels that

correspond to an image of a face within a digitally-captured image, and determining

corresponding image attributes to said group of pixels, and (b) perfecting said auto

focus by performing said auto focus on said plurality of groups of pixels that correspond

to said image of said face, and (c) wherein the face pixels identifying step being

automatically performed by an image processing apparatus, the method further

comprising *manually removing* an indication as a face of at least one of said plurality of

groups of pixels detected as a face and wherein the method being performed by

increasing a sensitivity level of said face identifying step.

As for **claim 41**, the prior art does not teach or fairly suggest the use of a digital

camera having a lens system, one or more processor readable storage devices having

processor readable code embodied thereon, said processor readable code for

programming one or more processors to perform a method of adjusting a digitally-

detected image based on detection of faces within the image to achieve a desired

image parameter, comprising (a) identifying a group of pixels that correspond to a face

within the digitally-detected image, (b) determining initial values of one or more

parameters of pixels of the group of pixels, (c) automatically adjusting values of the one

or more parameters of the pixels of the group of pixels based upon a comparison of the

initial parameter with the desired parameter, and the one or more parameters of pixels

of the group of pixels comprising *a location of the face* within the digitally-detected

image.

As for **claim 45**, the prior art does not teach or fairly suggest the use of a digital

camera having a lens system, one or more processor readable storage devices having

processor readable code embodied thereon, said processor readable code for

programming one or more processors to perform a method of adjusting a digitally-

detected image based on detection of faces within the image to achieve a desired

image parameter, comprising (a) identifying a group of pixels that correspond to a face

within the digitally-detected image, (b) determining initial values of one or more

parameters of pixels of the group of pixels, (c) automatically providing an option for

adjusting values of the one or more parameters of the pixels of the group of pixels

based upon a comparison of the *initial parameter with the desired parameter*, and the

one or more parameters of pixels of the group of pixels comprising *a location of the face*

within the digitally-detected image.

Any comments considered necessary by applicant must be submitted no later

than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on

Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chriss S. Yoder, III whose telephone number is (571) 272-7323. The examiner can normally be reached on M-F: 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CSY
December 19, 2007

LIN YE
SUPERVISORY PATENT EXAMINER